

Attorney's Docket No.: 07977-084002 / US3151D1

REMARKS

Claims 1-24 remain pending with claims 1, 7, 13 and 19 being independent. Reconsideration and allowance are requested in view of the following remarks.

For the reasons set forth at page 2 of the office action, claims 1-24 stand rejected under the doctrine of obviousness-type double patenting over claims 1-26 of U.S. Patent No. 6,160,600 ("the '600 patent"). Without conceding the propriety of this rejection, a terminal disclaimer is provided herewith to obviate the rejection.

For the reasons set forth at pages 3-6 of the office action, claims 1-7, 9-13, 15-19 and 21-24 stand rejected variously under 35 USC 102(e) (incorrectly identified in the office action as "103(e)") and/or 103(a) as allegedly being unpatentable over one or more of Hirakata (USP 5,977,562), Ota (USP 6,108,065), and Misawa (USP 5,250,931). (Claims 8, 14, and 20 have not been rejected under statutory grounds.) These rejections and their underlying rationale are traversed.

Initially, applicants acknowledge that submission of an English translation of the priority document is required to formally remove Hirakata as prior art. Applicants reserve the right to submit an English translation at a later date.

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Applicants dispute the Examiner's assertion that the three issues listed at page 5 of the office action were applicants' "only arguments" in the response filed July 30, 2001. At page 13, lines 17-23 of the response, it is expressly stated that all three of the cited references (Hiraka, Ota and Misawa), whether taken alone or in hypothetical combination, fail to disclose or suggest a method of driving a reflective type LCD device wherein the liquid crystal material is oriented in a hybrid alignment nematic (HAN) mode. The Examiner is not free to simply ignore this assertion. Accordingly, full and explicit consideration of this argument is requested. In particular, the Examiner is requested to identify *specific column and line numbers* in Hiraka, Ota and Misawa that he believes disclose the noted features.

Further to the above, the Examiner cannot escape his responsibility for identifying specific teachings in the applied references simply by asserting that the claimed features are "known in the art." The three features (liquid crystal material employing HAN mode, ITO material used for pixel and counter electrodes, specific advantages of reflective-type LCD) alleged by the Examiner at page 3 of the office action to be "known in the art" are *not* "capable of instant and unquestionable demonstration as being 'well-known' in the art." In re Ahlert,

424 F.2d 1088, 1091 (CCPA 1970). Consequently, the Examiner must cite one or more references, and identify specific teachings therein, in support of these assertions. Absent such citations, no prima facie case of obviousness has been established and thus the rejection must be withdrawn.

Applicants submit that none of the cited references discloses or suggests a method of driving a reflective type LCD device, as recited in claims 1, 7, 13, and 19, in which the liquid crystal material is oriented in the HAN mode. Even if, for the sake of argument, one replaced the devices disclosed in any of the references with a reflective type LCD device, one might not have been able to orient the liquid crystal material in a particular manner. Each of the methods recited in claims 1, 7, 13, and 19, as a result of the features recited therein, enables a causal relationship between the reflective type device and the HAN mode orientation. This is described in the specification at page 13:

"If this midway plane is used as a turning point and the device is designed as a reflection type, then the liquid crystal molecules are oriented in exactly the same way as liquid crystal molecules in a HAN-mode."

Therefore, the HAN mode orientation is created as a result of using the reflective type LCD device, which has not been disclosed or suggested in the art of record.

The reflective type LCD device has the advantages, among others, of low power consumption and size reduction. Additionally, the reflective type LCD device in claims 1, 7, 13, and 19 further enables the liquid crystal material to orient in a HAN mode. Orienting liquid crystal material in the HAN mode provides several advantages such as those described in the specification. For example, in a case that parallel electric field (in-plane switching, "IPS") is utilized, a switching speed of a liquid crystal molecule may be slow. However, because the response speed of liquid crystal molecules in the HAN mode is high (see, e.g., the specification at page 17, lines 9-19), it generally is advantageous for the reflective type liquid crystal display device to be driven in the higher operation speed.

In contrast, both Hirakata and Ota disclose a transmission type LCD operated by the parallel electrical field. When a liquid crystal display device is operated in the IPS, the aperture ratio typically is inferior because the electrode for generating the electric field should be formed over a same substrate. Therefore, it is preferable for a transmittance type liquid crystal display device that a strong backlight is equipped in the display device. As a result, the power consumption may be poor. On the other hand, if the liquid crystal display device operated in the IPS is a reflective type,

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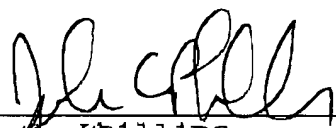
then it typically is unnecessary to locate a backlight in the display device. Thus, power consumption of the reflective type typically is better than that of the transmittance type.

Accordingly, the independent claims are allowable at least for the foregoing reasons. Each of the remaining claims depends directly or indirectly from one of the independent claims discussed above. Accordingly, these dependent claims are allowable for the reasons that their respective independent claims are allowable and for reciting allowable subject matter in their own right. Independent consideration and allowance of the dependent claims are requested.

Applicant asks that all claims be allowed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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